

CLAIM AMENDMENTS:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) An enhanced network management system comprising:
a connection to a wide area network, the connection configured to receive management information via a plurality of virtual connections from a corresponding plurality of data communication nodes;
wherein each node is configured to monitor equipment fault information for customer owned equipment and service level information for provider owned connections;
wherein each data communication node couples a particular local area network to the wide area network;
wherein the management information transmitted from each of the plurality of data communication nodes includes service level information for a transparent connection between the local area network associated with the data communication node and the wide area network, the transparent connection being intermediate between the wide area network and the local area network, the transparent connection carrying encapsulated data traffic between the local area network and the wide area network, the management information further including equipment failure information for a bridging node configured to generate the encapsulated data traffic;
wherein the management information, when presented to a customer, allows the customer to differentiate between network outages caused by customer equipment failures and provider service events.
2. (Previously Presented) The network management system as recited in Claim 1, wherein the transparent connection is a Digital Subscriber Line (DSL) connection that carries Frame Relay packets encapsulated according to a DSL protocol, and wherein the management information relates to encapsulated frame relay packets communicated between networks.

3. (Original) The network management system as recited in Claim 1, wherein the management information is according to a Simple Network Management Protocol (SNMP).

4. (Original) The network management system as recited in Claim 1, wherein the transparent connection is an intermediate network to the wide area network and a local area network.

5. (Previously Presented) A network management system comprising:
a data network report collector for providing analysis of management information, providing notification of equipment failures, and providing administration of service level agreements for customers; and
a data router having an interface coupled to a wide area network;
wherein data collected via the interface includes the management information regarding a service level for a plurality of provider owned transparent connections for carrying data traffic between a plurality of local area networks and the wide area network;
wherein the transparent connections are situated between the plurality of local area networks and the wide area network;
wherein the management information further includes equipment fault information for a bridging node configured to generate encapsulated data traffic; and
wherein the management information, when presented to a customer, allows the customer to differentiate between network outages caused by customer equipment failures and provider service events.

6. (Canceled).

7. (Currently Amended) The network management system as recited in Claim 5, wherein the data traffic is communicated between the local area network and the wide area network according to a first protocol and the bridging node encapsulates the data traffic from the local area network node according to a second protocol.

8. (Original) The network management system as recited in Claim 7, wherein the first protocol is a frame relay type protocol and the second protocol is a Digital Subscriber Line (DSL) protocol.

9. (Original) The network management system as recited in Claim 7, wherein a second node de-encapsulates the data traffic and transmits the data traffic to the wide area network.

10. (Original) The network management system as recited in Claim 9, wherein the second node is a Digital Subscriber Line Access Multiplexer (DSLAM).

11. (Previously Presented) A method comprising:

collecting management information for a transparent connection carrying encapsulated data traffic, the management information further including equipment failure information for a bridging node configured to generate the encapsulated data traffic;

identifying the equipment failure information using the collected management information;

separately identifying service provider service level information using the collected management information; and

presenting the service level information and detected equipment failures to a customer to allow the customer to differentiate between network outages caused by customer equipment failures and provider service events.

12. (Canceled).

13. (Original) The method as recited in Claim 11, further comprising:
providing notification of a detected equipment failure.

14. (Canceled).

15. (Original) The method as recited in Claim 11, wherein the transparent connection is an intermediate network between a local area network and a wide area network.

16-25. (Canceled).

26. (Previously Presented) A network management system comprising:
a report collector for providing analysis of management information, providing notification of equipment failures, and providing administration of service level agreements for customers, wherein the management information includes equipment failure information for a bridging node configured to generate encapsulated data traffic; and
a middleware server configured to collect management information from a plurality of data communication nodes for a transparent Digital Subscriber Line (DSL) connection between a wide area network and a plurality of local area networks, each local area network being associated with a corresponding data communication node, the management information being collected for the transparent Digital Subscriber Line via a Frame Relay network, the middleware server being further configured to forward the collected management information to the report collector, wherein, when presented to a customer, the collected management information allows the customer to differentiate between network outages caused by customer equipment failures and provider service events.

27. (Original) The network management system of Claim 26, wherein the management information comprises customer equipment fault information and service level information of the transparent DSL connection.

28. (Original) The network management system of Claim 27, wherein the customer equipment is a DSL bridge that encapsulates Frame Relay packets.

29. (Original) The network management system of Claim 26, wherein the report collector is configured to display the management information to a user.

30. (Original) The network management system of Claim 26, wherein the management information is used to differentiate between customer equipment failure and a service level agreement violation.

31. (Original) The network management system of Claim 26, wherein frame relay packets are transparently encapsulated according to a DSL protocol and sent over the DSL connection.

32. (Original) The network management system of Claim 26, further comprising: a router coupled to the Frame Relay network and the middleware server.

33. (Previously Presented) A method comprising:

collecting management information from a plurality of data communication nodes for a transparent Digital Subscriber Line (DSL) connection between a wide area network and a plurality of local area networks, each local area network being associated with a corresponding Frame Relay data communication node, the DSL connection carrying encapsulated Frame Relay packets between the plurality of Frame Relay data communication nodes, wherein the management information includes equipment failure information for a bridging node configured to generate encapsulated data traffic;

differentiating between a network outage caused by customer equipment failure and a service provider service level event using the management information; and providing differentiated management information to a user.

34. (Original) The method of Claim 33, wherein the management information comprises equipment fault information of a DSL bridge and service level information of the transparent DSL connection.

35. (Original) The method of Claim 33, wherein the management information is collected via a Frame Relay network.

36. (Original) The method of Claim 33, wherein the management information is collected via a virtual circuit from one of the Frame Relay data communication nodes, wherein the virtual circuit communicates according to a Frame Relay protocol.

37. (Original) The method of Claim 33, wherein at least one of the data communication nodes is implemented as a channel service unit/data service unit.

38. (Previously Presented) The system of Claim 1, wherein each virtual connection operates in accordance with one of a simple network management protocol (SNMP) or a common reliable accounting for network element (CRANE) format.

39. (Previously Presented) The system of Claim 1, wherein the provider owned connections comprise a Digital Subscriber Line (DSL) connection carrying encapsulated frame relay packets between the wide area network and the local area network.